Experiment 3 Preliminary Work
Transformers and MATLAB Workshop

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Contents

1 Step 1

The document entitled, "Supplementary Notes on Transformers", is studied.

2 Step 2

The document entitled, "Introduction to MATLAB", is studied.

3 Step 3

In this step the signal data given in ODTUClass are taken as reference. The signals can be represented as;

$$v_1 = 7.5sin(2\pi 100t)$$

$$v_2 = 2.5sin(2\pi 300t)$$

$$v_3 = 1.5sin(2\pi 500t)$$

First the signals are plotted in same figure and given Figure 1.

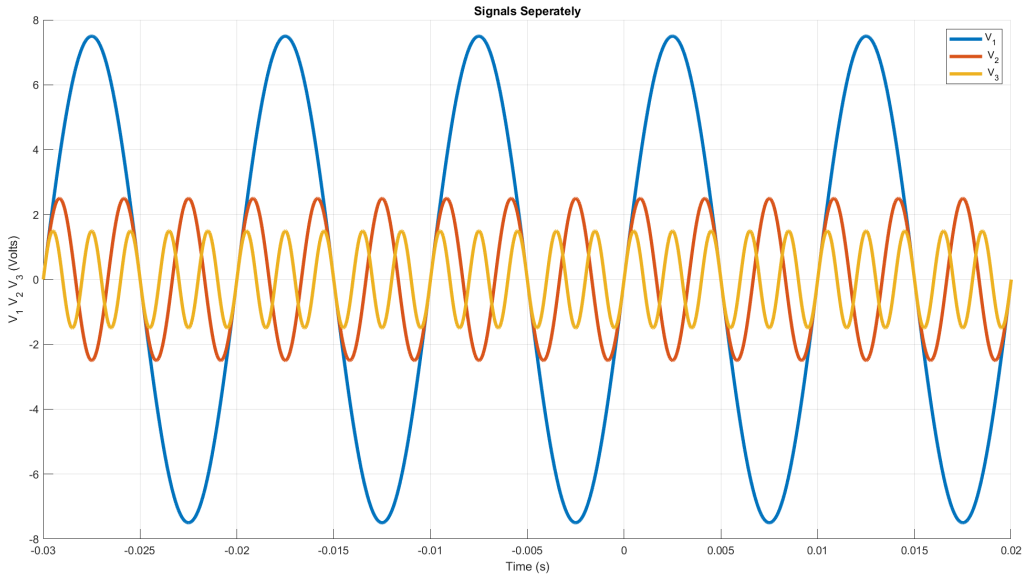

Figure 1: All three signals seperately

Then the signals are plotted progressively. First only the v1 signal is plotted. Then the sum of v1 and v2 is plotted. Lastly, sum of all three signals is plotted.

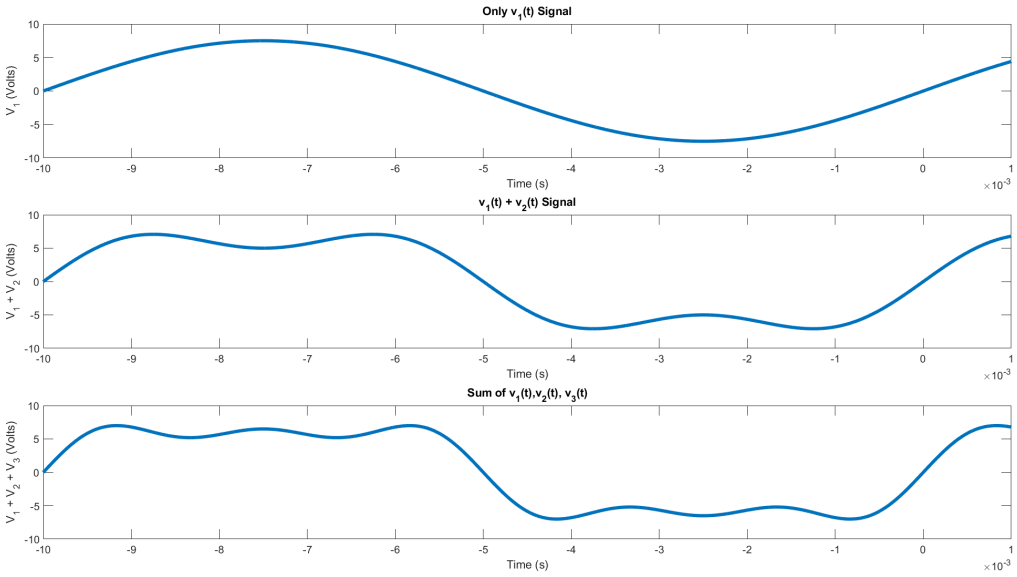

Figure 2: Progressive plot

As a result it can be said that as the different sine waves sums it approaches a square wave. So it is understood that perfect square wave is a sum of infinite square sine wave.

4 Conclusion

In this preliminary work document. Necessary documents are studied. Then it is observed how one can represent a square wave as the sum of different sine waves.